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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/816,867	03/23/2001	Fredrik Sundqvist	VCC0083-US	6067

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EXAMINER

KIM, CHONG HWA

ART UNIT	PAPER NUMBER
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3682

DATE MAILED: 01/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/816,867

Applicant(s)

SUNDQVIST ET AL.

Examiner

Chong H. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 and 11-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6 is/are allowed.
- 6) ☒ Claim(s) 7 and 11-16 is/are rejected.
- 7) ☒ Claim(s) 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on Oct 24, 2003 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 7 and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Francis, U.S. Patent 3,602,064 in view of Suzuki, U.S. Patent 4,793,206.

Francis shows, in Figs. 1-4, an arrangement for a parking brake comprising a lever 10 and a cable tensioning device 14, 16 but fails to show the two stage lever mechanism for removing slack and activating the parking brake.

Suzuki shows, in Figs. 1-10, an arrangement for a two-stage parking brake, the arrangement comprising;

a lever mechanism 15 and 33 connected to a wire 34, the lever mechanism configured to perform a first stage of operation (as described in column 3, lines 47-50 and shown in Fig. 2) in which slack is removed from the wire by the translational movement of the lever mechanism 15 upon activation of the lever and a second stage (Figs. 3 and 8) in which a force is exerted on the wire by the rotation movement of the lever mechanism 33 upon activation;

wherein the arrangement includes a pin-in-slot configuration 20, 22 utilized for performing the translational movement in the first stage for removing slack from the wire;

wherein the arrangement is configured to apply no force multiplication during the performance of the translational movement in the first stage for removing slack from the wire;

a force sensing mechanism 30 configured to sense the amount of force being imposed on the brake wire and transition operation of the arrangement between translational and rotational movement dependent thereupon; and

a spring 36 incorporated in the force sensing mechanism and a degree of compression of the spring controlling the transition between translational and rotational movement.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the cable tensioning device of Francis with the two stage parking brake as taught by Suzuki in order to provide the cable being "always automatically maintained in a suitable tension condition and a maintenance-free device" as described in column 4, lines 24-26 by Suzuki.

As to the matter of the arrangement including a pin-in-slot configuration, Suzuki shows, as discussed above in the rejection of claim 7 and particularly in Fig. 10, the arrangement for a two-stage parking brake comprising a key-in-slot configuration 10, 42 utilized for performing the

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translational movement in the first stage for removing slack from the brake wire, but fails to show a pin-in-slot configuration.

It would have been obvious to modify the key-in-slot configuration with a pin-in-slot configuration in Suzuki since the Examiner takes Official Notice of the equivalence of such engaging configurations for their use in the relative movement in mechanical arrangement and the selection of any of these known configurations to perform the relative movement in Suzuki would be within the level of ordinary skill in the art.

4. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Francis, U.S. Patent 3,602,064 in view of Suzuki, U.S. Patent 4,793,206.

Francis shows, in Figs. 1-4, an arrangement for a parking brake comprising a lever 10 and a cable tensioning device 14, 16 but fails to show the two stage lever mechanism for removing slack and activating the parking brake.

Suzuki shows, in Figs. 10 and 11, a parking brake for a vehicle comprising;
a housing holder 15 configured with at least one guide slot 42;
a lever 10, 14 having a rotation axle (at the mid-portion of the lever 14), wherein the lever is slidably and rotationally coupled to the guide slot, and wherein the lever is coupled to at least one force transmitting wire 9 in a brake system, the lever being arranged so that upon application, the parking brake operates in two steps to achieve a final intended brake power, in a first step, the lever and rotation axle are arranged to make a translational movement (Fig. 2) relative to the housing holder for taking up wire slack in the brake system, and in a second step, the lever is arranged to rotate about the rotation axle (Fig. 3), whereby force transmission to the

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wire takes place at a higher ratio than during the first step so as to achieve the final intended brake power.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the cable tensioning device of Francis with the two stage parking brake as taught by Suzuki in order to provide the cable being "always automatically maintained in a suitable tension condition and a maintenance-free device" as described in column 4, lines 24-26 by Suzuki.

Allowable Subject Matter

5. Claims 1-6 are allowed.
6. Claim 17 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 7 and 11-16 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chong H. Kim whose telephone number is (703) 305-0922. The examiner can normally be reached on Tuesday - Friday; 8:00 - 6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A Bucci can be reached on (703) 308-3668. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9326.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

chk
January 11, 2004


CHONG H. KIM
PRIMARY EXAMINER